Notice No.5

Rules and Regulations for the Classification of Naval Ships, January 2018

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Please note that corrigenda amends to paragraphs, Tables and Figures are not shown in their entirety.

Issue date: June 2018

Amendments to	Effective date	IACS/IMO implementation (if applicable)
Volume 3, Part 2, Chapter 2, Sections 1 & 2	1 July 2018	N/A
Volume 3, Part 3, Chapter 5, Section 7	1 July 2018	N/A

Volume 3, Part 2, Chapter 2
Environmental Protection

■ *Section 1*
General requirements

1.1 Application

1.1.5 Where necessary for the operational capability of the ship, proposals to inhibit, shut down or bypass emissions control equipment associated with the **ENV** notation will be considered, the associated arrangements and procedures are to be agreed by the owner and LR.

1.2 ENV class notation

1.2.1 **ENV** notation is assigned when the requirements for one or more of the following characters are complied with:

A	Anti-fouling coatings;
GW	Grey water and sewage;
IHM	Inventory of Hazardous Materials ~~(ship recycling)~~;
MRV	Monitoring, reporting and verification of carbon dioxide;
~~**NOx-1**, ~~**NOx-2**, **NOx-3**	Emissions of nitrogen oxides;
OW	Oily water management;
P	Oil tanks in protected locations;
RS	Refrigeration systems;
SOx	Emissions of sulphur oxides;
UWN	Underwater noise.

■ *Section 2*
ENV characters

2.3 Inventory of Hazardous Materials – IHM character

2.3.1 The **IHM** character will be assigned when the requirements of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships and/or EU Ship Recycling Regulation 1257/2013, as outlined in the LR *ShipRight Procedure to obtain IHM (Inventory of Hazardous Materials) certification,* have been satisfied.

2.3.2 The *ShipRight Procedure to obtain IHM (Inventory of Hazardous Materials) certification (see Vol 3, Pt 2, Ch 2, 2.3 Inventory of Hazardous Materials – IHM character 2.3.1*) provides information on the compilation of the Inventory of Hazardous Materials and subsequent onboard verification survey and certification offered by LR.

2.3.3 The *ShipRight Procedure* also includes procedures to be established and implemented for the maintenance of the Inventory of Hazardous Materials throughout the ship's life. These maintenance procedures are to be established and implemented to address new installations containing hazardous materials specified in Appendices 1 and 2 of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships and/or those specified in the EU Ship Recycling Regulation 1257/2013, and relevant changes to the ship's structure and fitted equipment.

2.3.4 In addition to the requirements of the *ShipRight Procedure*, where applicable, additional Naval Administration requirements shall be considered. In such cases details are to be provided in the tailoring document.

2.3.5 The *ShipRight Procedure* is intended to provide compliance with the relevant recycling legislation for the safe and environmentally friendly recycling of ships. It is not intended to provide procedures for the management of all substances hazardous to human health. Separate arrangements will be required to satisfy such Naval Administration requirements.

Existing paragraphs 2.3.1 to 2.3.4 have been deleted.

2.5 Emissions of nitrogen oxides – ~~NOx-1, ~~NOx-2, NOx-3 character~~s~~

2.5.1 For assignment of the ~~NOx-1 or NOx-2~~ **NOx-2** character, the total weighted value of NO_x emissions from all installed diesel engines with an individual output power greater than 130 kW, other than those used solely for emergency purposes on the ship on which the engine is installed, is not to exceed 80 per cent of the total weighted Tier II NO_x emission limits specified in MARPOL Annex VI, *Regulation 13 – Nitrogen Oxides (NOx)*. There are no specific requirements relating to NO_x emissions from boilers, incinerators or gas turbine installations.

2.5.3 The total weighted emission value for the ship (*WV*) is to be calculated as follows:

$$WV_{[\mathrm{ship}]} = \frac{WAEV_{[\mathrm{cert}]}}{WAEV_{[\mathrm{IMO}]}}$$

where

$$WAEV_{[\mathrm{Cert}]} = \frac{\sum_{n=1}^{n}\left(\mathrm{NO}_{\mathrm{x}[\mathrm{cert}]} \cdot P\right)}{\sum_{n=1}^{n}(P)}$$

$$WAEV_{[\mathrm{IMO}]} = \frac{\sum_{n=1}^{n}\left(\mathrm{NO}_{\mathrm{x}[\mathrm{IMO}]} \cdot P\right)}{\sum_{n=1}^{n}(P)}$$

n = the number of individual engines on board the ship
P = the rated power in kW, of each individual installed engine
$\mathrm{NO}_{\mathrm{x[cert]}}$ = the certified NO_x emission value, in g/kWh, for each individual engine
$\mathrm{NO}_{\mathrm{X[IMO]}}$ = the Tier II NO_x emission limit value, in g/kWh of each individual engine, ~~in g/kWh, applicable at the date of construction of the ship, or installation date of the engine, as applicable,~~ as specified in *Regulation 13 – Nitrogen Oxides (NOx) of Annex VI to MARPOL*.

2.5.4 ~~For ships constructed before 1 January 2011, the **NOx1** character will be assigned when:~~

$$\cancel{\frac{WAEV_{[\mathrm{cert}]}}{WAEV_{[\mathrm{IMO}]}} \leq 0{,}80}$$

~~For ships constructed on or after 1 January 2011, the~~ The **NOx-2** character will be assigned when:

$$\frac{WAEV_{[\mathrm{cert}]}}{WAEV_{[\mathrm{IMO}]}} \leq 0{,}80$$

2.5.5 For assignment of the **NOx-3** character, all installed engines with an individual output power greater than 130 kW, other than those used solely for emergency purposes, and associated NO_x emission abatement systems are to be certified as meeting the Tier III NO_x emission limits specified in *Regulation 13 – Nitrogen Oxides (NOx)*.

2.5.10 The following plans and documents are to be submitted~~:~~

(a) For supplementary character~~s **NOx-1** and~~ **NOx-2**:
Technical documentation to demonstrate that the total weighted value of NO_x emissions from all installed engines (excluding emergency generator and engines with an individual power output of less than 130 kW) does not exceed 80 per cent of the ~~applicable *Annex V of MARPOL 73/78Regulations for the Prevention of Pollution by Garbage from Ships* limits~~ *Annex VI - Regulations for the Prevention of Air Pollution from Ships Tier II limits*;

(b) For supplementary character **NOx-3**:
Technical documentation, including certification, to demonstrate all engines (excluding emergency generator and engines with an individual power output of less than 130 kW) comply with *Annex VI - Regulations for the Prevention of Air Pollution from Ships Tier III limits*.

2.8 Refrigeration systems, RS character

2.8.1 These requirements apply to all permanently installed refrigeration and air-conditioning installations on board with more than 3 kg of refrigerant. These requirements do not apply to stand-alone refrigerators, freezers and ice makers used in galleys, pantries, bars and crew accommodation.

Table 2.2.1 Refrigerant leak testing - maximum periodicity

Charge size	Periodicity	Leakage
~~under 3 kg~~	~~6 months~~	~~10%~~
3–30 kg	3 months	10%
30–300 kg	Monthly	5%
Over 300 kg	Monthly	<3%

2.9 Emissions of sulphur oxides, SOx character

2.9.4 Alternative arrangements providing an equivalent level of environmental protection will be considered for the assignment of the **SOx** character. If an Exhaust Gas Cleaning System is fitted, it is to be certified to *Resolution MEPC.184(59) – 2009 Guidelines for Exhaust Gas Cleaning Systems – (adopted on 17 July 2009)*. These systems are to operate at all times regardless of the emission control area in which the vessel operates.

~~2.9.4~~ 2.9.5 The following plans and documents are to be submitted:

- Bunker specification that will be used to purchase fuel for the ship.

Volume 3, Part 3, Chapter 5
Safety of Navigation and Communication

■ *Section 7* Safety of navigation and communication equipment arrangements

7.1 Equipment arrangements objective

(Part only shown)

7.1.5 **Equipment arrangements Goal 4.** All navigation and communications and communications equipment is to be arranged so as it remains operable in all reasonably foreseeable conditions:

(c) Where the system design intent specifies 'darken ship' requirements:
  - (i) control indicators and alarms associated with navigation are to be arranged to support safe operation at the primary conning position; or
  - (ii) arrangements are to be provided to pass alarms and warnings from an appropriate alternative conning position to the primary conning position;
  - (iii) where the vessel is being steered from an alternative conning position, control indicators and alarms associated with navigation are to be arranged to support safe operation in that location;
  - (iv) a justification for the selected arrangements taking into account the operational requirements and the available manning is to be provided.

© Lloyd’s Register Group Limited 2018
Published by Lloyd’s Register Group Limited
Registered office (Reg. no. 08126909)
71 Fenchurch Street, London, EC3M 4BS
United Kingdom

Lloyd’s Register and variants of it are trading names of Lloyd’s Register Group Limited, its subsidiaries and affiliates. For further details please see http://www.lr.org/entities

Lloyd's Register Group Limited, its subsidiaries and affiliates and their respective officers, employees or agents are, individually and collectively, referred to in this clause as ‘Lloyd's Register’. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.